

--The active material feedstock may furthermore comprise a microstructured or nanostructured material, which after thermal spray results in electrodes with microstructured or nanostructured active material, respectively. As used herein, "microstructured" materials refers to materials having a grain size on the order of 0.1 to about 500 micrometers (microns), and "nanostructured" materials refers to materials having grain size on the order of about 1 to about 100 nanometers (where 1 nm = 10 angstroms). Nanostructured materials are thus characterized by having a high fraction of the materials' atoms residing at grain or particle boundaries. For example, with a grain size in the five nanometer range, about one-half of the atoms in a nanocrystalline or a nanophase solid reside at grain or particle interfaces. Rapid interaction between the active materials and its surroundings are possible because of high surface area of the nanostructured materials. Therefore, the materials could sustain high current charging and discharging conditions. Thermal spray of nanostructured feedstocks to produce nanostructured coatings is disclosed in allowed U.S. patent application Serial No. 09/019,061, filed February 5, 1998, entitled "Nanostructured Feeds for Thermal Spray Systems, Method of Manufacture, and Coatings Formed Therefrom," which is a continuation of U.S. patent application Serial No. 08/558,133 filed November 13, 1995, which is incorporated herein by reference. Active material feedstocks comprising larger grain sizes are also within the scope of the present invention.--

Please accept the following specification paragraph in re-written "clean form".

This paragraph is the 1st paragraph on page 15 of the specification.

--D. Reprocessing of Nanostructured Pyrite.

Nanostructured pyrite is synthesized by aqueous solution method at low temperature (<90°C) in relatively short period (2-4 hours). Synthesized nanostructured FeS₂ has a particle size less than 100 nm. About 20 grams of sulfur powder was mixed with 200 grams of the nanostructured pyrite powder and ball milled in a ceramic jar for 24 hours. Thereafter, the uniformly mixed powder is placed in a vacuum oven, and dried at 150°C under vacuum for 12 hours. The treated powder then is dispersed in 10% PVA solution and the suspension is then spray dried at 200°C in accordance with U.S. Ser. No. 08/558,133 above. The particle size of reprocessed powder is in the range of 1-200 microns.--

In the Claims:

Please cancel claims 1-20 and 29-36 without prejudice.